

STIC Search Report

STIC Database Tracking Number: 150103

TO: Lissi Marquis Location: JEF- 8D61

Art Unit: 2813

Monday, April 11, 2005

Case Serial Number: 10/040627

From: Darcy Bates Location: EIC 2800

JEF- 4B68

Phone: 571-272-2540

darcy.bates@uspto.gov

Search Notes

Re: 10/040,627 US 5,422,524

Attached are search results.

No U. S. litigation was found in searches of Lexis-Nexis and Questel-Orbit databases.

If more searching or explanation is needed, please let me know.

Thanks, Darcy Bates



Smith, Teresa (ASRC)

From:

Marquis, Lissi

Sent:

To:

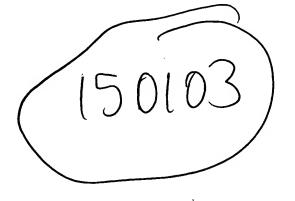
Subject:

Wednesday, April 06, 2005 7:51 AM STIC-EIC2800 LITIGATION SEARCH FOR REISSUE 10040627

here is the family history,

Thanks a million!

10040627 < snquery.pl?APPL ID=10040627> is a continuation of 08869844 < snquery.pl?APPL ID=08869844> Which is a reissue of 08152687 < snquery.pl?APPL ID=08152687> is a division of 07203972 < snquery.pl?APPL ID=07203972>



PALM INTRANET

Day : Monday Date: 4/11/2005 Time: 09:42:35

Application Number Information

Application Number: 10/040627 Assignments

Examiner Number: 73435 / TAMAI, KARL

Filing or 371(c) Date: 01/09/2002

IFW IMAGE Group Art Unit: 2834

Effective Date: 01/09/2002

Class/Subclass: 310/090.000

Application Received: 01/09/2002

Lost Case: NO

Patent Number:

Interference Number:

Issue Date: 00/00/0000

Unmatched Petition: NO

Date of Abandonment: 00/00/0000

Attorney Docket Number: P64591US2

L&R Code: Secrecy Code:1

Third Level Review: NO Status: 90 /ALLOWED -- NOTICE OF ALLOWANCE NOT YET MAILED

Secrecy Order: NO Status Date: 02/03/2005

Confirmation Number: 3842

Oral Hearing: NO

Title of Invention: ANTIFRICTION BEARING AND ALTERNATOR INCORPORATING SAME FOR USE IN VEHICLES

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
Appln Info	Contents Petition Info	Atty/Agent Info Conf	tinulty Data Foreign D	ata inventors Addre	SS Fees Post Info	Pre Grant Pub
Search Anot	her: Application# 🗔	Search	or Patent#	Search		
	PCT / Towns / Towns Lines.	Search or	PG PUBS #	Search		
	Attorney Docket	#	Search			
	Bar Code #	Search :				

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PALM INTRANET Continuity Information for 10/040627

Day : Monday Date: 4/11/2005 Time: 09:42:42

Parent Data

10040627 is a continuation of <u>08869844</u> Which is a reissue of <u>08152687</u> is a division of <u>07203972</u>

Child Data No Child Data

Appininto Contents Relition Info Atty/Agent Info Continuity Data Foreign Data Inventors Address Fees Post Info Pre Gran	it Pub
Search Another: Application# Search or Patent# Search	
PCT / Search or PG PUBS # Search	
Attorney Docket # Search	
Bar Code # Search Search	

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PALM INTRANET

Day: Monday Date: 4/11/2005 Time: 09:42:47

Application Number Information

Application Number: 08/869844 Assignments

Filing or 371(c) Date: 06/05/1997 Effective Date: 06/05/1997

Application Received: 06/05/1997

Patent Number: RE37967 Issue Date: 01/21/2003

Date of Abandonment: 00/00/0000

Attorney Docket Number: P64591US0 Status: 150 /PATENTED CASE

Confirmation Number: 6235

Examiner Number: 73435 / TAMAI, KARL

Group Art Unit: 2834

IFW IMAGE Class/Subclass: 310/090.000

Lost Case: NO

Interference Number: Unmatched Petition: NO L&R Code: Secrecy Code:1

Third Level Review: NO

Secrecy Order: NO

Status Date: 01/02/2003

Oral Hearing: NO

Title of Invention: ANTIFRICTION BEARING AND ALTERNATOR INCORPORATING SAME FOR USE IN VEHICLES

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
08869844ZA	28C1	05/10/2004	No Charge to Location	No Charge to Name	NGO,CHAU	
Appla Info	itents Petition Info	Atty/Agent Info	Continuity Data, Foreign Data	Inventors Address (Fees Post Info Pr	e Grant Pub
Search Anothe	er: Application#	Search	or Patent#	earch		
	PCT/	Search	or PG PUBS #	Search		
	Attorney Docke	t # [Search			
	Bar Code #	Seal	rch			

To go back use Back button on your browser toolbar.

Day: Monday Date: 4/11/2005 Continuity Information for 08/869844 Time: 09:42:54 **Parent Data** 08869844 is a reissue of <u>08152687</u> is a division of 07203972 Child Data 10040627 is a continuation of 08869844 Appin Info: Contents Petition Info Atty/Agent Info Continuity Data Foreign Data Inventors Address Fees Post Info Pre-Grant Pub Search Another: Application# Search or Patent# Search PCT / Search or PG PUBS # Search, Attorney Docket # Search Bar Code # Search

To go back use Back button on your browser toolbar.

PALM INTRANET

Day: Monday Date: 4/11/2005 Time: 09:42:59

Application Number Information

Application Number: 08/152687 Assignments

Filing or 371(c) Date: 11/16/1993 Effective Date: 11/16/1993 Application Received: 11/16/1993

Patent Number: <u>5422524</u>
Issue Date: <u>06/06/1995</u>
Date of Abandonment: <u>00/00/0000</u>

Attorney Docket Number: P133005 Status: 150 /PATENTED CASE

Application Number, 00/13/2007 Assignments

Examiner Number: 69091 / HASZKO, DENNIS Group Art Unit: 2102

Class/Subclass: 310/090.000

Lost Case: NO
Interference Number:
Unmatched Petition: NO
L&R Code: Secrecy Code:1

Third Level Review: NO

Secrecy Order: NO

Status Date: 05/26/1995

Confirmation Number: 2005 Oral Hearing: NO

Title of Invention: ANTIFRICTION BEARING AND ALTERNATOR INCORPORATING SAME FOR USE IN VEHICLES

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
08152687	9210	04/01/2005	No Charge to Location	No Charge to Name	WYATT,DONNA	
		COLUMN A COL				
Appln Info	Contents Petition I	nfo Atty/Agent Info	Continuity Data Foreign L	Data inventors Address	Fees Post Info	re Grant Pub
		ar (4.44, 14)				
Search And	other: Application	on# Sea	or Patent#	Search		
	PCT //	Search	or PG PUBS #	Search		
	Attorney Do	cket #	Search		•	
	Bar Code #		Search »			

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Day: Monday Date: 4/11/2005 PALM INTRANET Time: 09:43:04 Continuity Information for 08/152687 Parent Data 08152687 is a division of <u>07203972</u> **Child Data** 08869844 is a division of <u>07203972</u> 10040627 is a continuation of 08869844 Applin Info Contents Petition Info Atty/Agent Info Continuity Data Foreign Data Inventors Address Fees Post Info Pre Grant Pub Search Another: Application# Search or Patent# Search or PG PUBS # [PCT / Search Attorney Docket # Search Bar Code # Search

To go back use Back button on your browser toolbar.

Day: Monday Date: 4/11/2005 Time: 09:43:10

PALM INTRANET **Application Number Information**

Application Number: 07/203972 Assignments

Filing or 371(c) Date: 06/08/1988

Effective Date: 06/08/1988

Application Received: 06/08/1988 Patent Number:

Issue Date: 00/00/0000

Date of Abandonment: 11/23/1993 Attorney Docket Number: P13-1560-A88

Status: 164 / ABANDONED -- FAILURE TO PAY ISSUE FEE

Examiner Number: 59883 / FOOTLAND, LENARD

Group Art Unit: 2405

Class/Subclass: 384/492.000

Lost Case: NO

Appeal Number: 931131 Unmatched Petition: NO L&R Code: Secrecy Code:1

Third Level Review: NO

Secrecy Order: NO

Status Date: 11/23/1993

Oral Hearing: YES Confirmation Number: 5752

Title of Invention: ANTIFRICTION BEARING AND ALTERNATOR INCORPORATING SAME FOR USE IN VEHICLES

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
07203972	28X1	09/05/2003	No Charge to Location	No Charge to Name	TAMAI,KARL	
		11				
Appln Info	Contents Petition In	Atty/Agent Info	Continuity Data Foreign Da	ta Inventors Address	Fees Post Info	Pre Grant Pub
•						
C	.41 41: - 4: -		Dodonati C			
Search And	other: Applicatio	n# Sear	or Patent#	Search		
	PCT/	Search	or PG PUBS#	Search		
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	Attorney Do	cket#	Search			
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	Bar Code # [S	earch			

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Back to PALM | ASSIGNMENT | OASIS | Home page

Day: Monday Date: 4/11/2005 PALM INTRANET Time: 09:43:17 **Continuity Information for 07/203972 Parent Data** No Parent Data **Child Data** 08152687 is a division of 07203972 08869844 is a division of 07203972 10040627 is a continuation of 08869844 Applin Info Contents Petition Info Atty/Agent Info Continuity Data Foreign Data Inventors Address, Fees Post Info Pre-Grant Publy Search Another: Application# or Patent# Search Search PCT / Search or PG PUBS # Search Attorney Docket# Search Bar Code # To go back use Back button on your browser toolbar.

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Patent Search - Number: 5,422,524

No cases containing this patent number were found

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Source: Legal > Area of Law - By Topic > Patent Law > Patents > U.S. Patents > Utility Patents

Terms: patno=5422524 (Edit Search)

152687 (08) 5422524 June 6, 1995

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

5422524

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Link to Claims Section

June 6, 1995

Antifriction bearing and alternator incorporating same for use in vehicles

REISSUE: Reissue Application filed Jun. 5, 1997 (O.G. Apr. 21, 1998) Ex. Gp.: 2102; Re. S.N. 08/869,844, (O.G. April 21, 1998)

June 9, 2002 - Reissue Application filed Ex. Gp.: 2834; Re. S.N. 10/040,627 (O.G. August 6, 2002)

January 21, 2003 - This Patent was reissued as Reissue Patent RE 37,967 (O.G. January 21, 2003)

INVENTOR: Nakamura, Sigenobu - Chiryu, Japan (JP); Siga, Tutomu - Aichi, Japan (JP); Mitani, Kenzo - Obu, Japan (JP); Fujita, Yoshiki - Osaka, Japan (JP); Kitamura, Masayuki - Osaka, Japan (JP); Miyazaki, Hiroyuki - Osaka, Japan (JP); Hoshino, Teruo - Osaka, Japan (JP)

APPL-NO: 152687 (08)

FILED-DATE: November 16, 1993

GRANTED-DATE: June 6, 1995

PRIORITY: June 10, 1987 - 62145483, Japan (JP); June 10, 1987 - 62145484, Japan (JP)

ASSIGNEE-AT-ISSUE: Koyo Seiko Co., Ltd., Osaka, Japan (JP), 03

Nippondenso Co., Ltd., Osaka, Japan (JP), 03

ASSIGNEE-AFTER-ISSUE: January 26, 1998 - CHANGE OF NAME (SEE DOCUMENT FOR DETAILS)., DENSO CORPORATION 1-1, SHOWA-CHO KARIYA-SHI, AICHI-KEN JAPAN, Reel and Frame Number: 09123/0625

April 8, 2002 - CHANGE OF NAME (SEE DOCUMENT FOR DETAILS)., DENSO CORPORATION 1-1, SHOWA-CHO, KARIYA-SHI AICHI-KEN JAPAN, Reel and Frame Number: 12762/0568

LEGAL-REP: Nikaido, Marmelstein Murray & Oram

PUB-TYPE: June 6, 1995 - Utility Patent having no previously published pre-grant publication (A)

PUB-COUNTRY: United States (US)

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y Lexis My Search (Research Tasks) Search Advisor (Goorces Guided Search Forms Command Searching	et a Document √ Shepa	ard's [®] \	ECLIPSE History 丘
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● Terms and Connectors ○ Natural Language patno=5422524 ,	Suggest Terms for Mv Search	between s connector	ectors to show relationships search terms. (Hover over a for description. Click a to add to search.)
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Selected file: PLUSPAT

Search statement 1

Query/Command : us5422524/pn

** SS 5: Results 1

Search statement 6

Query/Command : prt fu legalall max

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1 / 1 PLUSPAT - @QUESTEL-ORBIT - image
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PN - US5422524 A 19950606 [US5422524]

TI - (A) Antifriction bearing and alternator incorporating same for use in vehicles

PA - (A) KOYO SEIKO CO (JP); NIPPON DENSO CO (JP)

PAO - Koyo Seiko Company, Ltd., Osaka [JP] Nippondenso Company, Ltd., Osaka [JP]

IN - (A) KITAMURA MASAYUKI (JP); MIYAZAKI HIROYUKI (JP); NAKAMURA SIGENOBU (JP); HOSHINO TERUO (JP); SIGA TUTOMU (JP); FUJITA YOSHIKI (JP); MITANI KENZO (JP)

AP - US15268793 19931116 [1993US-0152687]

FD - Divsn of US203972 19880608 [1988US-0203972]

PR - US15268793 19931116 [1993US-0152687] JP14548387 19870610 [1987JP-0145483] JP14548487 19870610 [1987JP-0145484] US20397288 19880608 [1988US-0203972]

IC - (A) F16C-035/00 H02K-005/16

EC - F16C-033/62 H02K-005/173C

PCL - ORIGINAL (O) : 310090000; CROSS-REFERENCE (X) : 029898140
310042000

DT - Corresponding document

CT - US4240682; US4323401; US4429924; US4476405; US4546280; US4696581; US4808226

STG - (A) United States patent

AB - An antifriction bearing includes a fixed ring which comprises a steel containing up to about 10% of residual austenite. An alternator for vehicles includes a stator mounted on a frame, a rotor having its rotary shaft rotatably supported by a pair of bearings on the frame and a drive pulley mounted on one end of the shaft projecting outward from the frame. The outer ring of at least the bearing toward the pulley comprises a steel containing up to about 10% of residual austenite.

1 / 1 LGST - ©EPO

PN - US5422524 A 19950606 [US5422524]

AP - US15268793 19931116 [1993US-0152687]

ACT - 19980126 US/AS01-A

CHANGE OF NAME

OWNER: DENSO CORPORATION 1-1, SHOWA-CHO KARIYA-SHI, AICHI;

EFFECTIVE DATE: 19970807

19980126 US/AS01-A

CHANGE OF NAME

OWNER: NIPPONDENSO CO., LTD.; EFFECTIVE DATE: 19970807

19980421 US/RF-A

REISSUE APPLICATION FILED EFFECTIVE DATE: 19970605

20020408 US/AS-A

ASSIGNMENT

OWNER: DENSO CORPORATION 1-1, SHOWA-CHO, KARIYA-SHI AICHI;

EFFECTIVE DATE: 19970807

CHANGE OF NAME; ASSIGNOR: NIPPONDENSO CO.,

LTD.; REEL/FRAME: 012762/0568

20020806 US/RF-A

REISSUE APPLICATION FILED

EFFECTIVE DATE: 20020109

UP - 2004-44

1 / 1 CRXX - @CLAIMS/RRX

AN - 2612541

PN - 5,422,524 A 19950606 [US5422524] PA - Denso Corp JP; Koyo Seiko Co Ltd JP

PT - E (Electrical)

ACT - 19970605 REISSUE REQUESTED

ISSUE DATE OF O.G.: 19980421

REISSUE REQUEST NUMBER: 08/869844

EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2102

Reissue Patent Number: USRE37967

19980126 REASSIGNED

CHANGE OF NAME

Assignor: NIPPONDENSO CO., LTD. DATE SIGNED: 08/07/1997

Assignee: DENSO CORPORATION 1-1, SHOWA-CHO KARIYA-SHI, AICHI-KEN

JAPAN

Reel 009123/Frame 0625

Contact: REID & PRIEST LLP NATHANIEL A. HUMPHRIES 701 PENNSYLVANIA

AVENUE NW SUITE 800 WASHINGTON, D.C. 20004

20020109 REISSUE REQUESTED

ISSUE DATE OF O.G.: 20020806

REISSUE REQUEST NUMBER: 10/040627

EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2834

Reissue Patent Number:

20020408 REASSIGNED

CHANGE OF NAME

Assignor: NIPPONDENSO CO., LTD. DATE SIGNED: 08/07/1997

Assignee: DENSO CORPORATION 1-1, SHOWA-CHO, KARIYA-SHI AICHI-KEN

JAPAN

Reel 012762/Frame 0568

Contact: REID & PRIEST LLP NATHANIEL A. HUMPHRIES 701 PENNSYLVANIA

AVENUE NW SUITE 800 WASHINGTON, D.C. 20004

UP -1999-00 UACT-2002-08-06 URAS-2002-11-12

Search statement 6

Query/Command : fam us5422524/pn

1 Patent Groups ** SS 6: Results 6

Search statement 7

Query/Command : famstate nonstop

1 / 6 PLUSPAT - @QUESTEL-ORBIT

DE3851573 D1 19941027 [DE3851573] PN -

(D1) Granted EP number in bulletin STG -

OTI -(D1) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter Fahrzeugalternator.

PA - (D1) NIPPON DENSO CO (JP); KOYO SEIKO CO (JP)
IN - (D1) NAKAMURA SIGENOBU (JP); SIGA TUTOMU (JP); MITANI KENZO

(JP); FUJITA YOSHIKI (JP); KITAMURA MASAYUKI (JP)

IC -(D1) F16C-033/62 H02K-005/173

PN2 -DE3851573 T2 19950323 [DE3851573]

STG2-(T2) Trans. Of EP patent

OTI2- (T2) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter Fahrzeugalternator.

PA2 - (T2) NIPPON DENSO CO (JP); KOYO SEIKO CO (JP)

IN2 - (T2) NAKAMURA SIGENOBU (JP); SIGA TUTOMU (JP); MITANI KENZO

(JP); FUJITA YOSHIKI (JP); KITAMURA MASAYUKI (JP)

IC2 -(T2) F16C-033/62 H02K-005/173

AP -DE3851573 19880609 [1988DE-3851573]

JP14548387 19870610 [1987JP-0145483] JP14548487 19870610 [1987JP-0145484] PR -

1 / 1 LEGALI - ©EPO

PN - DE3851573 D1 19941027 [DE3851573] DE3851573 T2 19950323 [DE3851573]

DE3851573 19880609 [1988DE-3851573]

ACTE- 19950921 DE/8363-A [-]
OPPOSITION AGAINST THE PATENT

20000120 DE/8331-A [-]
COMPLETE REVOCATION
UP - 2003-22:

2 / 6 PLUSPAT - @QUESTEL-ORBIT - image PN - EP0294813 A2 19881214 [EP-294813]

STG - (A2) Pub. Of applic. Without search report

TI - (A2) Antifriction bearing and alternator incorporating same for use in vehicles.

OTI - (A2) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter Fahrzeugalternator. (A2) Palier antifriction et alternateur de véhicule comprenant un tel palier.

PA - (A2) KOYO SEIKO CO (JP); NIPPON DENSO CO (JP)

IN - (A2) KITAMURA MASAYUKI; NAKAMURA SIGENOBU; SIGA TUTOMU; FUJITA YOSHIKI; MITANI KENZO

IC - (A2) F16C-033/62 H02K-005/173
PN2 - EP0294813 A3 19900110 [EP-294813]

STG2- (A3) Publi. Of search report

TI2 - (A3) ANTIFRICTION BEARING AND ALTERNATOR INCORPORATING SAME FOR USE IN VEHICLES

PN3 - EP0294813 B1 19940921 [EP-294813]

STG3- (B1) Patent

TI3 - (B1) Antifriction bearing and alternator incorporating same for use in vehicles.

OTI3- (B1) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter Fahrzeugalternator.
(B1) Palier antifriction et alternateur de véhicule comprenant un

tel palier.
(B1) KOYO SEIKO CO (JP); NIPPON DENSO CO (JP)

IN3 - (B1) KITAMURA MASAYUKI (JP); NAKAMURA SIGENOBU (JP); SIGA TUTOMU (JP); FUJITA YOSHIKI (JP); MITANI KENZO (JP)

IC3 - (B1) F16C-033/62 H02K-005/173

LA - ENGLISH (ENG)

AP - EP88109225 19880609 [1988EP-0109225] PR - JP14548387 19870610 [1987JP-0145483] JP14548487 19870610 [1987JP-0145484]

EC - F16C-033/62 H02K-005/173C

DS - DE FR GB IT

DT - Basic

PA3 -

1 / 1 LEGALI - ©EPO

PN - EP0294813 A2 19881214 [EP-294813]EP0294813 A3 19900110

[EP-294813]EP0294813 B1 19940921 [EP-294813]

AP - EP88109225 19880609 [1988EP-0109225]

ACTE- 19881214 EP/AK-A [+]

DESIGNATED CONTRACTING STATES:

DE FR GB IT

19900110 EP/AK-A [+]

DESIGNATED CONTRACTING STATES:

DE FR GB IT

19900620 EP/17P-A [+]

REQUEST FOR EXAMINATION FILED

EFFECTIVE DATE: 19900421 19911211 EP/17Q-A [+] FIRST EXAMINATION REPORT EFFECTIVE DATE: 19911024 19940921 EP/AK-A [+] DESIGNATED CONTRACTING STATES: DE FR GB IT 19941027 EP/REF-A · CORRESPONDS TO: (DE 3851573 19941027 [DE3851573]) 19941110 EP/ET-A [+] FR: TRANSLATION FILED 19941206 EP/ITF-A [+] IT: TRANSLATION FOR A EP PATENT FILED OWNER: STUDIO TORTA SOCIETA' SEMPLICE 19950816 EP/26-A [-] OPPOSITION FILED OPPONENT: AB SKF; EFFECTIVE DATE: 19950619 19991215 EP/GBPR-A [-] GB: PATENT REVOKED UNDER ART. 102 OF THE EP CONVENTION DESIGNATING THE UK AS CONTRACTING STATE 991024 19991215 EP/27W-A [-] REVOKED EFFECTIVE DATE: 19991024 **UP** - 2004-06 3 / 6 PLUSPAT - @QUESTEL-ORBIT PN - JP63308218 A 19881215 [JP63308218] STG - (A) Doc. Laid open to publ. Inspec.

TI - (A) ROLLING BEARING

PA - (A) KOYO SEIKO CO; NIPPON DENSO CO (A) KOYO SEIKO CO; NIPPON DENSO CO (A) KOYO SEIKO CO LTD; NIPPON DENSO CO LTD IN -(A) KITAMURA MASAYUKI; MIYAZAKI HIROYUKI; HOSHINO TERUO; FUJITA YOSHIKI; NAKAMURA SHIGENOBU; MITANI KENZOU; SHIGA TSUTOMU IC -(A) F16C-033/62 AP - JP14548387 19870610 [1987JP-0145483] PR - JP14548387 19870610 [1987JP-0145483] 4 / 6 PLUSPAT - @QUESTEL-ORBIT - image PN - JP63308219 A 19881215 [JP63308219] (A) Doc. Laid open to publ. Inspec. (A) AC GENERATOR FOR VEHICLE (A) NIPPON DENSO CO; KOYO SEIKO CO

STG -TI -PA -PA0 -(A) NIPPON DENSO CO LTD; KOYO SEIKO CO LTD IN -(A) NAKAMURA SHIGENOBU; MITANI KENZOU; SHIGA TSUTOMU; KITAMURA MASAYUKI; FUJITA YOSHIKI ic - (A) F16C-033/62 H02K-007/08 PN2 - JP7072565 B 19950802 [JP95072565] STG2- (B) Publd. Examined patent applic. IC2 - (B) F16C-033/62

PA0 -

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AP - JP14548487 19870610 [1987JP-0145484]
PR - JP14548487 19870610 [1987JP-0145484]
5 / 6 PLUSPAT - @QUESTEL-ORBIT - image
PN - US5422524 A 19950606 [US5422524]
STG - (A) United States patent
TI - (A) Antifriction bearing and alternator incorporating same for use
       in vehicles
PA -
       (A) KOYO SEIKO CO (JP); NIPPON DENSO CO (JP)
PA0 -
       Koyo Seiko Company, Ltd., Osaka [JP]
        Nippondenso Company, Ltd., Osaka [JP]
       (A) KITAMURA MASAYUKI (JP); MIYAZAKI HIROYUKI (JP); NAKAMURA
IN -
       SIGENOBU (JP); HOSHINO TERUO (JP); SIGA TUTOMU (JP); FUJITA
       YOSHIKI (JP); MITANI KENZO (JP)
IC -
      (A) F16C-035/00 H02K-005/16
AP - US15268793 19931116 [1993US-0152687]
PR - US15268793 19931116 [1993US-0152687]
        JP14548387 19870610 [1987JP-0145483]
        JP14548487 19870610 [1987JP-0145484]
       US20397288 19880608 [1988US-0203972]
EC - F16C-033/62
       H02K-005/173C
PCL - ORIGINAL (O): 310090000; CROSS-REFERENCE (X): 029898140
310042000
DT - Corresponding document
1 / 1 LEGALI - ©EPO
PN - US5422524 A 19950606 [US5422524]
AP - US15268793 19931116 [1993US-0152687]
ACTE-
      19980126 US/AS01-A
        CHANGE OF NAME
        OWNER: DENSO CORPORATION 1-1, SHOWA-CHO KARIYA-SHI, AICHI;
        EFFECTIVE DATE: 19970807
        19980126 US/AS01-A
        CHANGE OF NAME
        OWNER: NIPPONDENSO CO., LTD.; EFFECTIVE DATE: 19970807
        19980421 US/RF-A
        REISSUE APPLICATION FILED
        EFFECTIVE DATE: 19970605
        20020408 US/AS-A
        ASSIGNMENT
        OWNER: DENSO CORPORATION 1-1, SHOWA-CHO, KARIYA-SHI AICHI;
        EFFECTIVE DATE: 19970807
        CHANGE OF NAME; ASSIGNOR: NIPPONDENSO CO.,
        LTD.; REEL/FRAME: 012762/0568
        20020806 US/RF-A
        REISSUE APPLICATION FILED
        EFFECTIVE DATE: 20020109
UP - 2004-44
6 / 6 PLUSPAT - @QUESTEL-ORBIT - image
PN - USRE37967 E1 20030121 [USRE37967]
STG - (E1) Reissue Patent
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TI -
         (E1) Antifriction bearing and alternator incorporating same for
          use in vehicles
          (E1) KOYO SEIKO CO (JP); DENSO CORP (JP)
PAO - Koyo Seiko Company, Ltd., Osaka [JP]
          Denso Corporation, Kariya [JP]
         (E1) KITAMURA MASAYUKI (JP); MIYAZAKI HIROYUKI (JP); NAKAMURA
IN -
          SIGENOBU (JP); HOSHINO TERUO (JP); SIGA TUTOMU (JP); FUJITA
          YOSHIKI (JP); MITANI KENZO (JP)
          (E1) F16C-035/00 H02K-005/16
IC -
         US86984497 19970605 [1997US-0869844].

US86984497 19970605 [1997US-0869844].

JP14548387 19870610 [1987JP-0145483].

JP14548487 19870610 [1987JP-0145484].

US15268793 19931116 [1993US-0152687].

US20397288 19880608 [1988US-0203972].
AP -
PR -
EC -
          F16C-033/62
          H02K-005/173C
PCL -
          ORIGINAL (O): 310090000; CROSS-REFERENCE (X): 029898140
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Terms: 37967 (Edit Search)

869844 (08) RE 37967 January 21, 2003

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

RE **37967**

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Link to Claims Section

January 21, 2003

Antifriction bearing and alternator incorporating same for use in vehicles

INVENTOR: Nakamura, Sigenobu - Anjo, Japan (JP); Siga, Tutomu - Aichi-ken, Japan (JP); Mitani, Kenzo - Obu, Japan (JP); Fujita, Yoshiki - Osaka, Japan (JP); Kitamura, Masayuki - Osaka, Japan (JP); Miyazaki, Hiroyuki - Osaka, Japan (JP); Hoshino, Teruo - Osaka, Japan (JP)

APPL-NO: 869844 (08)

FILED-DATE: June 5, 1997

GRANTED-DATE: January 21, 2003

PRIORITY: June 10, 1987 - 62145483, Japan (JP); June 10, 1987 - 62145484, Japan (JP)

ASSIGNEE-AT-ISSUE: Koyo Seiko Co., Ltd., Osaka, Japan (JP), 03

Denso Corporation, Kariya, Japan (JP), 03

LEGAL-REP: Jacobson Holman PLLC

PUB-TYPE: January 21, 2003 - Reissue Patent (E1)

PUB-COUNTRY: United States (US)

REL-DATA:

Reissue of: 08/152687, November 16, 1993, PENDING 05422524, June 6, 1995

US-MAIN-CL: 310#90

US-ADDL-CL: 310#42, 29#898.14

CL: 310, 29

SEARCH-FLD: 310#90, 310#42, 029#898.14

IPC-MAIN-CL: 7F 16C035#0

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Search statement 4

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1 / 1 PLUSPAT - @QUESTEL-ORBIT - image

PN - USRE37967 E1 20030121 [USRE37967]

TI - (E1) Antifriction bearing and alternator incorporating same for use in vehicles

PA - (E1) KOYO SEIKO CO (JP); DENSO CORP (JP)

PAO - Koyo Seiko Company, Ltd., Osaka [JP]

Denso Corporation, Kariya [JP]

IN - (E1) KITAMURA MASAYUKI (JP); MIYAZAKI HIROYUKI (JP); NAKAMURA SIGENOBU (JP); HOSHINO TERUO (JP); SIGA TUTOMU (JP); FUJITA YOSHIKI (JP); MITANI KENZO (JP)

AP - US86984497 19970605 [1997US-0869844]

FD - Reissue of: US5422524 - 19950606

IC - (E1) F16C-035/00 H02K-005/16

EC - F16C-033/62

H02K-005/173C

PCL - ORIGINAL (O): 310090000; CROSS-REFERENCE (X): 029898140 310042000

DT - Corresponding document

CT - US4191599; US4240682; US4323401; US4429924; US4476405; US4546280; US4634908; US4696581; US4808226; AT362807; GB1361553; JP56-34615 Okamoto et al., Effect of SI and Retained Austenite on the Rolling Fatigue Life of Bearing Steel, Seititsu Kenkyu, No. 277, 1973.*

Tsushima et al., "Improvement of Rolling Contact Fatigue Life of Carburized Tapered Rolling Bearings", SAE Technical Paper 860725, Apr. 1986.*

Patent Abstracts of Japan, unexamined applications, section C, vol. 12, No. 82 (c-481), Mar. 15, 1988.

"Zwischenstufenumwandlung von Walzlagerstahlen," WTS 74 06 20, SKF Kugellagerfabriken GmBH (Feb. 1974).

E. Yamija et al., "Effects of Retained Austenite on the Rolling Fatigue Life of Ball Bearing Steels,"translation of article published in J. Japan Inst. Metals, vol. 36, p. 711 (1972).

Handbook of Metals, Japan Metal Society, Maruzen Co., Ltd. (Rev. 4th Ed., 1982), sections 7.6.1-7.6.2.

STG -(E1) Reissue Patent

AB -An antifriction bearing includes a fixed ring which comprises a steel containing up to about 10% of residual austenite. An alternator for vehicles includes a stator mounted on a frame, a rotor having its rotary shaft rotatably supported by a pair of bearings on the frame and a drive pulley mounted on one end of the shaft projecting outward from the frame. The outer ring of at least the bearing toward the pulley comprises a steel containing up to about 10% of residual austenite.

UP 2003-05

Search statement

Query/Command : fam re37967/pn

1 Patent Groups ** SS 4: Results 6

Search statement

Query/Command : famstate nonstop

1 / 6 PLUSPAT - @QUESTEL-ORBIT

PN -DE3851573 D1 19941027 [DE3851573]

STG -(D1) Granted EP number in bulletin

(D1) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter OTI -Fahrzeugalternator.

PA -

(D1) NIPPON DENSO CO (JP); KOYO SEIKO CO (JP)
(D1) NAKAMURA SIGENOBU (JP); SIGA TUTOMU (JP); MITANI KENZO IN -

(JP); FUJITA YOSHIKI (JP); KITAMURA MASAYUKI (JP)

IC -(D1) F16C-033/62 H02K-005/173

PN2 -DE3851573 T2 19950323 [DE3851573]

(T2) Trans. Of EP patent STG2-

OTI2- (T2) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter Fahrzeugalternator.

PA2 -(T2) NIPPON DENSO CO (JP); KOYO SEIKO CO (JP)

IN2 -(T2) NAKAMURA SIGENOBU (JP); SIGA TUTOMU (JP); MITANI KENZO

(JP); FUJITA YOSHIKI (JP); KITAMURA MASAYUKI (JP)

IC2 -(T2) F16C-033/62 H02K-005/173

DE3851573 19880609 [1988DE-3851573] AP -

JP14548387 19870610 [1987JP-0145483] JP14548487 19870610 [1987JP-0145484] PR -

LEGALI - ©EPO

DE3851573 D1 19941027 [DE3851573] DE3851573 T2 19950323 [DE3851573]

AP -DE3851573 19880609 [1988DE-3851573]

19950921 DE/8363-A [-] ACTE-OPPOSITION AGAINST THE PATENT 20000120 DE/8331-A [-] COMPLETE REVOCATION

UP - 2003-22

2 / 6 PLUSPAT - ©QUESTEL-ORBIT - image

PN - EP0294813 A2 19881214 [EP-294813]

STG - (A2) Pub. Of applic. Without search report

TI - (A2) Antifriction bearing and alternator incorporating same for use in vehicles.

OTI - (A2) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter Fahrzeugalternator.

(A2) Palier antifriction et alternateur de véhicule comprenant un tel palier.

PA - (A2) KOYO SEIKO CO (JP); NIPPON DENSO CO (JP)

IN - (A2) KITAMURA MASAYUKI; NAKAMURA SIGENOBU; SIGA TUTOMU; FUJITA
YOSHIKI; MITANI KENZO

IC - (A2) F16C-033/62 H02K-005/173

PN2 - EP0294813 A3 19900110 [EP-294813]

STG2- (A3) Publi. Of search report

TI2 - (A3) ANTIFRICTION BEARING AND ALTERNATOR INCORPORATING SAME FOR

USE IN VEHICLES

PN3 - EP0294813 B1 19940921 [EP-294813]

STG3- (B1) Patent

TI3 - (B1) Antifriction bearing and alternator incorporating same for use in vehicles.

OTI3- (B1) Reibungsloses Lager und mit einem solchen Lager ausgerüsteter Fahrzeugalternator.

(B1) Palier antifriction et alternateur de véhicule comprenant un tel palier.

PA3 - (B1) KOYO SEIKO CO (JP); NIPPON DENSO CO (JP)

IN3 - (B1) KITAMURA MASAYUKI (JP); NAKAMURA SIGENOBU (JP); SIGA TUTOMU

(JP); FUJITA YOSHIKI (JP); MITANI KENZO (JP)

IC3 - (B1) F16C-033/62 H02K-005/173

LA - ENGLISH (ENG)

AP - EP88109225 19880609 [1988EP-0109225]

PR - JP14548387 19870610 [1987JP-0145483]

JP14548487 19870610 [1987JP-0145484]

EC - F16C-033/62 H02K-005/173C

DS - DE FR GB IT

DT - Basic

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PN - EP0294813 A2 19881214 [EP-294813]EP0294813 A3 19900110

[EP-294813]EP0294813 B1 19940921 [EP-294813]

AP - EP88109225 19880609 [1988EP-0109225]

ACTE- 19881214 EP/AK-A [+]

DESIGNATED CONTRACTING STATES:

DE FR GB IT

19900110 EP/AK-A [+]

DESIGNATED CONTRACTING STATES:

DE FR GB IT

19900620 EP/17P-A [+]

REQUEST FOR EXAMINATION FILED

EFFECTIVE DATE: 19900421

19911211 EP/17Q-A [+] FIRST EXAMINATION REPORT EFFECTIVE DATE: 19911024 19940921 EP/AK-A [+] DESIGNATED CONTRACTING STATES: DE FR GB IT 19941027 EP/REF-A CORRESPONDS TO: (DE 3851573 19941027 [DE3851573]) 19941110 EP/ET-A [+] FR: TRANSLATION FILED 19941206 EP/ITF-A [+] IT: TRANSLATION FOR A EP PATENT FILED OWNER: STUDIO TORTA SOCIETA' SEMPLICE 19950816 EP/26-A [-] OPPOSITION FILED OPPONENT: AB SKF; EFFECTIVE DATE: 19950619 19991215 EP/GBPR-A [-] GB: PATENT REVOKED UNDER ART. 102 OF THE EP CONVENTION DESIGNATING THE UK AS CONTRACTING STATE 991024 19991215 EP/27W-A [-] REVOKED EFFECTIVE DATE: 19991024 UP - 2004-06 3 / 6 PLUSPAT - @QUESTEL-ORBIT PN - JP63308218 A 19881215 [JP63308218] STG - (A) Doc. Laid open to publ. Inspec. (A) ROLLING BEARING (A) KOYO SEIKO CO; NIPPON DENSO CO (A) KOYO SEIKO CO LTD; NIPPON DENSO CO LTD (A) KITAMURA MASAYUKI; MIYAZAKI HIROYUKI; HOSHINO TERUO; FUJITA YOSHIKI; NAKAMURA SHIGENOBU; MITANI KENZOU; SHIGA TSUTOMU (A) F16C-033/62 AP - JP14548387 19870610 [1987JP-0145483] PR - JP14548387 19870610 [1987JP-0145483] 4 / 6 PLUSPAT - @QUESTEL-ORBIT - image PN - JP63308219 A 19881215 [JP63308219] (A) Doc. Laid open to publ. Inspec. TI - (A) AC GENERATOR FOR VEHICLE PA - (A) NIPPON DENSO CO; KOYO SE PAO - (A) NIPPON DENSO CO; KOYO SEIKO CO
IN - (A) NAKAMURA SHIGENOBU. (A) NAKAMURA SHIGENOBU; MITANI KENZOU; SHIGA TSUTOMU; KITAMURA MASAYUKI; FUJITA YOSHIKI ic - (A) F16C-033/62 H02K-007/08 PN2 - JP7072565 B 19950802 [JP95072565] STG2- (B) Publd. Examined patent applic.

TI -PA -

PAO -

IC -

STG -

IC2 - (B) F16C-033/62

AP - JP14548487 19870610 [1987JP-0145484] PR - JP14548487 19870610 [1987JP-0145484]

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5 / 6 PLUSPAT - @QUESTEL-ORBIT - image
PN - US5422524 A 19950606 [US5422524]
STG - (A) United States patent
TI - (A) Antifriction bearing and alternator incorporating same for use
       in vehicles
PA -
       (A) KOYO SEIKO CO (JP); NIPPON DENSO CO (JP)
PA0 -
       Koyo Seiko Company, Ltd., Osaka [JP]
       Nippondenso Company, Ltd., Osaka [JP]
IN -
       (A) KITAMURA MASAYUKI (JP); MIYAZAKI HIROYUKI (JP); NAKAMURA
       SIGENOBU (JP); HOSHINO TERUO (JP); SIGA TUTOMU (JP); FUJITA
       YOSHIKI (JP); MITANI KENZO (JP)
       (A) F16C-035/00 H02K-005/16
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       JP14548487 19870610 [1987JP-0145484]
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       H02K-005/173C
       ORIGINAL (O): 310090000; CROSS-REFERENCE (X): 029898140
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        19980126 US/AS01-A
        CHANGE OF NAME
        OWNER: NIPPONDENSO CO., LTD.; EFFECTIVE DATE: 19970807
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        REISSUE APPLICATION FILED
        EFFECTIVE DATE: 19970605
        20020408 US/AS-A
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       OWNER: DENSO CORPORATION 1-1, SHOWA-CHO, KARIYA-SHI AICHI;
       EFFECTIVE DATE: 19970807
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        LTD.; REEL/FRAME: 012762/0568
        20020806 US/RF-A
       REISSUE APPLICATION FILED
       EFFECTIVE DATE: 20020109
UP - 2004-44
6 / 6 PLUSPAT - @QUESTEL-ORBIT - image
PN - USRE37967 E1 20030121 [USRE37967]
STG - (E1) Reissue Patent
TI - (E1) Antifriction bearing and alternator incorporating same for
        use in vehicles
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(E1) KOYO SEIKO CO (JP); DENSO CORP (JP)
PA0 -
        Koyo Seiko Company, Ltd., Osaka [JP]
        Denso Corporation, Kariya [JP]
        (E1) KITAMURA MASAYUKI (JP); MIYAZAKI HIROYUKI (JP); NAKAMURA
IN -
        SIGENOBU (JP); HOSHINO TERUO (JP); SIGA TUTOMU (JP); FUJITA
        YOSHIKI (JP); MITANI KENZO (JP)
        (E1) F16C-035/00 H02K-005/16
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US86984497 19970605 [1997US-0869844]
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19870610
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        JP14548387
        JP14548487
                               [1987JP-0145484]
        US15268793 19931116
                               [1993US-0152687]
        US20397288 19880608 [1988US-0203972]
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        H02K-005/173C
        ORIGINAL (O): 310090000; CROSS-REFERENCE (X): 029898140
PCL -
310042000
        Corresponding document
UP -
        2003-05
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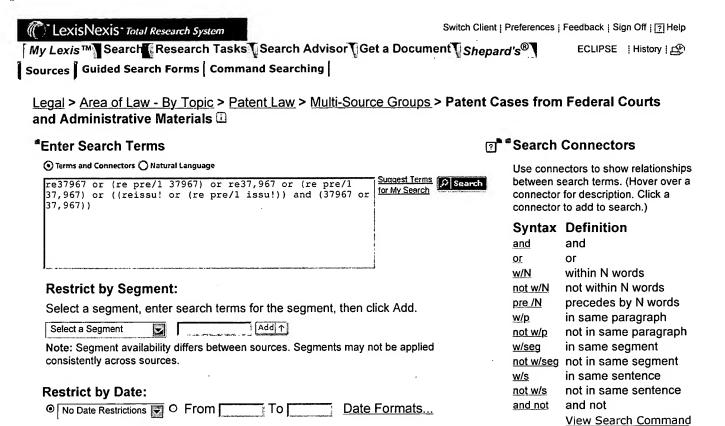
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